AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A protected aluminum mass, comprising:

a bare aluminum mass; and,

an attached layer ~~to~~ coating a surface of the bare aluminum mass ~~comprising~~, said attached layer comprises at least one carbon atom,

wherein said surface is an Al surface absent Al_2O_3 where the Al surface is covalently bonded to the attached layer.

2. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer comprises a moiety selected from at least one of a carboxylic acid derivative, alcohol derivative, thiol derivative, aldehyde derivative, and an amide derivative.

3. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer is comprised of a moiety of a carboxylic acid derivative.

4. (Previously Presented) The protected aluminum mass of claim 1, wherein the bare aluminum mass comprises micron-size aluminum particles.

5. (Previously Presented) The protected aluminum mass of claim 1, wherein the bare aluminum mass comprises nano-size aluminum particles.

6. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer comprises a monolayer.

7. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer is a monolayer comprised of a moiety of a carboxylic acid derivative.

8. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer is comprised of about 3 carbon atoms to about 20 carbon atoms.

9. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer is comprised of about 9 carbon atoms to about 12 carbon atoms.

10. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer is comprised of a moiety of a perfluoroalkyl carboxylic acid.

11. (Previously Presented) The protected aluminum mass of claim 10, wherein the perfluoroalkyl carboxylic acid is selected from the group consisting of $C_5F_9O_2H$, $C_9F_{17}O_2H$, $C_{10}F_{19}O_2H$ and $C_{14}F_{27}O_2H$.

12. (Previously Presented) The protected aluminum mass of claim 1, wherein the perfluoroalkyl carboxylic acid comprises $C_{14}F_{27}O_2H$.

13. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer is present in a mass amount from at least about a 5:1 molar ratio of aluminum to layer.

14. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer comprises at most about 85 weight percent of the total protected aluminum mass.

15. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer includes at least one functional group.

16. (Previously Presented) The protected aluminum mass of claim 1, wherein the attached layer includes an energetic moiety.

17. (Previously Presented) An energetic material comprising the protected aluminum mass of claim 1.

18. (Currently Amended) A process for forming a protected aluminum mass, comprising:

forming an unprotected aluminum mass; and,

adding a layer forming reactant, wherein the layer forming reactant ~~binds to~~ coats a surface of the unprotected aluminum mass as an attached protective layer,

wherein the surface is an Al surface absent Al_2O_3 where the Al surface is covalently bonded to the attached protective layer.

19. (Previously Presented) The process of claim 18, wherein an aluminum composition for forming the unprotected aluminum mass comprises $AlH_3!NR_1R_2R_3$, and

wherein R_1, R_2 and R_3 are independently selected from one of a hydrogen and an alkyl comprising 1 to about 10 carbon atoms, optionally in combination with at least one heterocycle

20. (Previously Presented) The protected aluminum mass produced by the process of claim 18.

21. (Previously Presented) The protected aluminum mass of claim 1, wherein said attached layer binds to said surface.

22. (Previously Presented) The protected aluminum mass of claim 1, wherein said attached layer binds to said bare aluminum mass.

23. (Previously Presented) The protected aluminum mass of claim 1, wherein a covalent aluminum-oxygen bond is formed linking said attached layer and said bare aluminum mass.